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III. Type of Agriculture

Powhatan county is located in the East Central District of Virginia. It is typical of the Piedmont section of Virginia. The land in Powhatan county is gently rolling, with elevations varying from 156-500 feet above sea level. The frost free growing season is about 190 days extending from about April 10 to October 25th. Annual precipitation is around 40 inches. This precipitation is fairly well distributed through out the year, although serious droughts are sometimes experienced during the summer growing season.

The county is bounded on the north by the James river which is the dividing line between Powhatan and Goochland. The Appomattox river divides Powhatan from Amelia county on the south. The county joins Chesterfield on the east, and Cumberland on the west. The county seat-Powhatan Courthouse is located in the center of the county, just off U.S. Highway 60, approximately 30 miles west of the State Capitol of Richmond.

According to the most recent census figures, there are 396 farms in Powhatan county. Land in farms total 80,152 acres or 46.7% of the approximate land area. The average size farm is 202 acres.

Agriculture is the chief industry. Milk and dairy products are the leading source of farm income, and accounts for nearly 50% of the total. Cattle and calves rank second in value of

products sold, poultry and its products rank third-with considerable increase shown, particularly in the production and sale of eggs. Tobacco accounts for the largest source of income from farm crops- approximately 170,000 pounds of tobacco is produced and other agricultural income would be from the sale of grain, hay, and vegetables. Forest product^s-pulp wood and saw timber are also important sources of farm income.

The use of modern equipment and labor saving machinery is much in evidence in the county. Of the 396 farms in the county 307 farmers uses a total of 459 tractors. Sixty-one farms in the county have milking machines and electric milk coolers. Seventy-two farms in the county have grain combines, thirty-five corn pickers, ninety-nine have pick-up bailers and forty-two have field forage harvesters.

IV. Description of County Organization

Organizations, have to do with Agriculture in Powhatan in Powhatan county are

1. County Agricultural Board consisting of representatives from the following committees:

- a. Dairy
- b. Beef
- c. Agronomy
- d. Forestry

2. The County Farm Bureau

3. The Farmers' Union

4. The Ruritan Club through its agricultural committees.

Each of these organizations have a role to play in the development of the agricultural program in the county.

The commodity committees meet with the extension agent for the purpose of studying the county situation as it relates to a certain commodity. These committees assist with planning the extension program for the county, and carrying out such plans as demonstrations on certain phases of farm activities.

The county Farm Bureau has an organization in the county that assist with many farm problems. Among these problems are Farm legislation, marketing certain commodities, and personal service programs.

The Farmers' Union also has an active organization in the county. The Union performs services similar to those performed by the Bureau.

The County Furitan club is very strong in the county. The Agricultural committee of the Furitan club has always been most active as a sponsoring group for project activity such as 4-H camp, corn club, pasture contest, forage contest etc.

The commodity committees have been active in planning and assisting with county Extension program. The Dairy committee has assisted in the distribution of Education information with bulk tanks and pipe line installations. This committee also assisted with the necessary details connected with the operation of the Dairy Herd Improvement Association, and the Artificial Breeding Association.

The beef cattle committee has assisted the Extension Agent in the selection and selling of approximately 500 beef calves through the Richmond Feeder Calf Association. This committee also assisted the agent in setting up and conducting demonstrations on

1. Castrating calves
2. Dehorning calves
3. Controlling external parasites on cattle
4. Inoculating calves for blackleg, Hemorrhagic Septicemia, and Malignant Indemia.

The Agronomy committee has assisted the county agent in:

1. Conducting farm tours
2. Demonstrations on "weevil" control in alfalfa
3. Demonstrations on "chickweed" control in alfalfa
4. Arrangement for Fair exhibits

V. Project Activity

1. Agronomy

The 1960 plan of work lists the following under the "Agronomy" heading. These objectives, methods to be used, and educational activities were reviewed and approved by the agronomy committee.

Problems to be considered

1. Alfalfa
 - a. Fertilization
 - b. Weevil control
 - c. Chickweed control
2. Use of soil testing service

3. Pasture Improvement
4. Use of recommended seed varieties

Methods to be used in connection with these problems were listed as follows:

1. Alfalfa demonstrations on
 - a. Proper fertilization, including annual top dressing.
 - b. Weevil control by the use of granular heptachlor, and other chemicals.
 - c. Chickweed control by use of chemicals.
2. Through meetings, letters, and other means of communication, advise farmers of the value of using the soil testing service of V.I.I., the proper way to collect soil samples, and the use of the correct amount and analysis of fertilizers.
3. Hold "County Wide Forage Contest"
4. Conduct demonstrations on seed varieties.

The educational activities to be used in connection with
Agronomy problems are :

1. Agronomy tours to alfalfa and pasture fields where approved practices are being carried out.
2. News stories on outstanding agronomy accomplishments.
3. Agronomy exhibits at local fairs by farmers and 4-H members.

1960 has been an average producing year for Powhatan farmers. The drought during July and W August was felt, but a good crop has been harvested in tobacco, corn, small grain, hay and pastures.

Demonstrations on agronomy practices were conducted on the following farms:

1. "Costel Bermuda grass" C. N. Elam
2. "Alfalfa weevil control" Lee Palmore
3. "Alfalfa Chickweed Control" Lee Palmore

One county pasture tour was conducted in August. Pastures were observed on the farms of C. N. Elam, Lee Palmore, R. A. Cosby and E. P. Hicks.

Many individual farm visits were made by the County Agent for the purpose of observing practices and making recommendations on agronomy problems. These problems include harvesting practices, use of machinery, curing and storing, management problems, fertilization and insect control.

Sixty-five farmers were assisted with some phase of production and farm marketing of farm crops. This includes the use of fertilizer, using improved varieties or strains of seed, harvesting, storing, curing, and efficient work methods.

With the assistance of eight local voluntary leaders, the county agent made 150 contacts individually or through meetings on some phase of the production of hay and pasture. Forty-five of these farmers were assisted directly or indirectly to adopt recommended practices.

Twenty county farmers were assisted in the production and sale of tobacco. The use of right varieties and strain have become most important in recent years. A total of 78 farmers in

Powhatan county grow some type of tobacco, the allotment per farm is small. The total pounds sold from the county annually would be less the 160,000 pounds. It is therefore most important that the farmers who ^{hold} tobacco allotments do everything possible to produce maximum quantity and quality.

Forty county families were assisted in some phase of vegetable gardening - monthly garden letters, giving timely tips were sent out from the county agent's office to interested families. Garden exhibits, both adult and 4-H were shown at the Goochland-Powhatan fair. One garden tour for 4-H boys was conducted by the county agent. Twenty-five families were assisted in the use of improved seed varieties, use of fertilizer, and the control of insects and diseases.

In the light of this past year's agronomy Extension work it is felt that next year's work can be strengthened securing more active participation in agronomy project work such as Forage Contest^o etc.

More county farmers should take advantage of the V.P. I. soil testing service. More attention should be given to annual top dressing hay and pasture crops once they are established. More attention should be giving to harvesting hay crops. Too many tons of poor quality hay is harvested because of weather conditions. More attention should be given to pasture management which includes rotational grazing.

2. Dairying

The 1960 census report shows 211 county farms reporting 2,359 milk cows - 54 of the farms in the county are classified as dairy farms. One hundred and two farms sell either milk or cream. \$1,200,000 worth of dairy products are sold annually.

The dairy cow brings more net profit into the county than any other farm enterprise, in fact more county revenue is from milk than from all other farm products combined. It should naturally follow that the Extension Agent spends a good percentage of his time on some phase of dairy science.

Powhatan county suits itself well to dairying. The county is so located the Grade A milk can be shipped to both the Norfolk and Richmond markets daily. Fork Union affords an excellent market for surplus milk and "grade B" products.

Powhatan county has one of the strongest D.H.I.A.'s in the state. One national milk record was made in 1960 and two in 1959. These were individual cow records, made by C. N. Klan and Son of Powhatan.

The Central Artificial Breeding Association with headquarters in Powhatan is one of the strongest in the state. The Technician for this association will breed well over 2,000 cows this year. A good number of our dairymen are now milking herds made up entirely of artificially bred cows.

From the "Longtime plan of Work" the dairy committee set up the following as goals for 1960.

1. To increase the membership in the local D.H.I.A., and if necessary look into the possibility of setting up another association to meet the needs of the county dairymen.

2. To increase the number of cows bred artificially.

3. To supervise 4-H boys with their dairy projects, and to have a 4-H a county judging team at the District Contest.

4. To follow through on the state "mastitis" program on the county level.

Methods to be used in meeting these objectives are listed as follows:

1. Hold analysis meeting for D.H.I.A. members.

2. Tours to demonstration dairy herds, for the purpose of showing the advantage of using the services of the Artificial Breeding program.

3. Have fitting and showing clinic for both adults and 4-H members.

4. Place "mastitis" posters in every dairy barn in the county.

5. See that all information available gets into the hands of each county dairymen.

6. Through general meetings, letters, news articles etc. get the "mastitis" message to dairymen.

7. Individual visits to dairy farms for consultations on individual dairy problems.

8. Visits by the agent to 4-H dairy projects.

9. Coach 4-H dairy judging team.

10. Monthly D.H.I.A. summary sheets to be prepared and

mailed to all D.H.I.A. members.

11. Exhibit dairy cattle in both the adult and 4-H classes at the state and local fairs.

The D.H.I.A. is now completing its fourth year. There are 22 herds in the association. Eighteen of these herds are in Powhatan county - one in Amelia, one in Coochland and two in Cumberland county.

The county agent has used these herds with their records, as demonstrations herds in good feeding, management, and record keeping. A herd analysis meeting was held early in the year, at which time the county agent went over the records with the individual herd owners. The average pounds of butter fat and milk in these herds have shown considerable increase from year to year, demonstrating the need for keeping good records on each individual cow, and using these records, not only in culling the herds but in the selection of replacement heifers.

An outstanding dairy accomplishment was again made this year by C. N. Elm and Son of Powhatan. Another of his purebred Guernseys was made National Champion by a class leading production record made in 1960. This added to the two national records made in 1959 brings quite an honor to the Elm family and to Powhatan county.

The Artificial Breeding is now in its eleventh year. Over 2,000 cows will be bred in this manner this year. Not all of the number are Powhatan cows, however. The headquarter of the "Central Artificial Breeding Association is located in Powhatan county, and it is estimated by the technician that two-thirds of these cows are in Powhatan with the ^{remaining} numbers being in the adjoining counties of Amelis, Goochland, Chesterfield and Cumberland.

Powhatan county has completed the necessary requirements under the state "Bangs" testing program, and is now declared a "Bangs" free county.

Six voluntary local leaders assisted the County Agent in contacting 125 county farmers on some phase of Dairy Science. It is estimated that eighty different farmers and other individuals were assisted directly or indirectly to adopt recommended practices. Sixty-five of these farmers were assisted in some phase of management. Twenty-five were assisted with selection and breeding. Twenty with feeding, twenty-five with controlling internal and external parasites, and twenty farmers were assisted with more efficient work methods.

All of the goals, as outlined in the 1960 plan of work were accomplished with the exception of setting up second D.H.I.A. A number of problems were faced. Illness of the supervisor set the work back considerably. Internal operational problems of the association were other factors standing in the way of increased memberships in the D.H.I.A.

In the light of last year's work in Dairy Science in Powhatan county, and considering the market and trends it is felt that program can best be strengthened by concentrated work with more efficient operations in mind.

Too many of the county dairymen are still using the old conventional barn, and handling milk in buckets and cans. Those dairymen who ship on the Richmond market are now required to use bulk tanks.

Another important problem confronting the dairymen is the question of health of the individual cow. This problem should be given constant attention, by the local herd owner, and by all other persons having to do with the responsibility of seeing that pure clean unadulterated milk is being produced and made available for the milk buying public who have a right to demand as much.

3. Livestock (beef)

Cattle and calves rank second in the value of farm products sold. Something over 3,000 head are sold annually from the farms in Powhatan county. The trend in beef production is on the up. The good market, through the Feeder Sale Associations, has had much to do with this increased in feeder calf production. Other factors also must be considered. The regular market price for cattle and calves has remained comparatively steady through the past several years, and the outlook is good. The labor squeeze on some of the dairy farms

has been responsible for a change to beef cattle. The county farm tobacco allotment has been, and is being steadily reduced with beef cattle in small numbers taking over these farms.

Through the cooperation of the county livestock committee the following was set up in the county plan of work for 1960 as county problems in the beef industry.

1. Too few beef producers were taking advantages of Feeder calf sales as marketing outlets.
2. Strict grading on the farm before selling is being neglected by many producers.
3. Many beef producers are not using pure bred bulls.
4. Management and feeding of beef cattle is not up to par in many of the county herds.

The methods to be used in solving these problems were outlined in the plan of work as follows:

1. Through meetings and personal contacts by the County Agent point out the advantages of marketing calves through the "Feeder Sales".
2. Assist the selection committee in the grading of calves on the farm before sales.
3. Assist beef cattle producers with locating, selecting, and purchasing pure bred beef bulls.
4. Hold livestock school for the purpose of discussing the following topics.
 - a. Management and feeding
 - b. Breeding
 - c. Castrating, dehorning and vaccinating calves

- d. Worming
- e. Grading
- f. Selecting heifers for brood cows
- g. Culling the herd

5. Conducted on the farm demonstrations on the above mentioned topics.

The County agent spent considerable time in 1960 working on some phase of beef cattle production. This work includes assisting the beef cattle committee in the selection of calves for the spring sale and the three fall sales. The agent assisted the Feeder Sales Association in the weighing, grading, and penning of these calves before the sale date.

Three castrating, dehorning and vaccination demonstrations were conducted by the County Agent. These demonstrations were held on the following farms

1. W. O. Holt in the Macon District
2. R. A. Cosby in the Spencer District
3. E. Strudwick in the Huguenot District

Four voluntary leaders assisted the Extension Agent in contacting eighty-five farmers individually or through meetings on some phase of beef cattle production. It is estimated that sixty farmers were assisted directly or indirectly to adopt recommended practices. Fifty farmers were assisted with some phase or production and management. Ten were assisted with feeding problems,

forty with feeding, twenty-five with controlling parasites both internal and external and fifteen were assisted with more efficient work methods.

It is estimated that fifty-five farmers and other individuals were assisted with some phase of farm marketing. Thirty farmers were assisted in preparation for market, outlook and market information was passed on to fifteen of these farmers, and eight farmers were assisted in arranging to sell and selling.

VI. 4-H Club Work

The 1960 "Plan of Work" sets forth the following under "goals"

1. Enroll at least 65 boys in club work
2. Hold regular monthly meetings outside of school
3. Increase completions to at least 80%
4. To take part in the District Contest
5. To supervise on the farm project
6. Secure at least one additional leader for a boy's club
7. Hold annual achievement day program
8. Observe National 4-H Club week
9. Hold annual meeting of county council
10. Recommend one boy to the state "All Star" chapter
11. Have at least 35 members from the county attend the summer 4-H camp

To meet these objectives, the following is listed as methods to be used

1. Meet with prospective members in school
2. Arrange for monthly meeting places out of school.
3. Work with boys on their individual club projects.
4. Coach 4-H members and teams who will compete in the District Contest.
5. Assist members with the completion of their records.
6. Assist members with their fair exhibits.

The educational activities in connection with above methods and goals would include

1. Newspaper stories and pictures of outstanding project work.
2. Reports from each club at the Achievement Day Program.
3. Posters made by members and leaders to be displayed in prominent places in the county.
4. 4-H Exhibits at the state and local fairs.

Fifty-six boys were enrolled five community clubs in 1960. These clubs met monthly on a community basis after school hours. The meeting would be the community public building or a private home of a leader. Two of these clubs carried community projects in addition to their individual project - both the Jefferson club and the Flat Rock club carried the entomology project.

Fifty-six boys were enrolled in sixty-five projects. Forty-five completed 54 satisfactory projects. The project with the largest number of completions was the entomology #1 project.

Twenty-three boys were enrolled in this project. Twenty of these boys completed the requirements necessary for Unit No. 1 of this project.

The electric project was undertaken by the interested members from all clubs in the county - sixteen members both boys and girls were enrolled. With the assistance of representative from the Virginia Electric and Power Co., ten of these members met the requirement for completion. Powhatan County was represented at the Electric Congress held in Richmond.

Five boys of the six enrolled completed the vegetable project. Seven out of seven completed the requirements for Unit No. 1 of the Forestry project. Among other project completions were; three in poultry, six in dairy, four in beef cattle, six in swine and six in Beautification of Home Grounds.

The 4-H clubs from Powhatan were represented at the District ~~Project~~ Contest. Robin Lester of the Belle ville club competed in the poultry production demonstration. He also gave this demonstration at the Short Course.

A county 4-h dairy judging team took part in the District Contest. This team composed of I.B. Wilson, Jr., Jimmy Wilson and Allen Willis placed third on the district basis.

The officers of the different clubs made up the membership in the County Council. A meeting of this council was held early in the year, at which time, "over-all plans" for 4-H work in the

county were made. This meeting also was used as an officer training school. The officers of each club received training in the duties of the particular office. Mrs. Joyce Wood, H.D.A. conducted the class in training the presidents and vice-presidents, Mrs. Katherine Brent, former H.D.A., taught the class for secretaries and treasurers, H.W. Henry, county agent conducted the class for song leader.

A. 4-H Achievement, and "Share the Fun" program was held. Miss Angelicia Simmons former IFYE was the chief speaker. Awards and medals were presented to outstanding 4-H members for their 4-H achievements.

Powhatan county sent deligation of six to the short course in Blacksburg - four boys and 2 girls. The county was represented at the Jamestown 4-H camp by twenty-seven members and two leaders.

Each of the 4-H clubs in the county held a club picnic during the summer and each club had a special Christmas program shortly before holiday.

One club - Ballsville held a lawn carnival for the purpose of raising funds for the club - something over \$30.00 was netted as a result of this undertaking.

Thirty-six County 4-h club members, along with two leaders and the County Agent made a special bus tour of Southern States in Richmond. This tour included trips to the grain receiving and storing plant, the egg handling plant, the retail facilities and the office building.

The clubs of the county observed "Rural Life Sunday with a special vesper program presented on the athletic field of the County Community house.

VII. Farm and Home Development

The Extension work in Powhatan county on the Farm and Home Developing program has been included in several other sections of this report, but by the way of summary the following figures are estimated:

Fourteen new families were started in Farm and Home Development program this year. This number, plus a previous total, makes forty one families worked with under this program for 1960. Of this number fifteen were families with whom Extension has had little or no previous contact, eight were families who were just getting started in farming, twenty-five were families with low income, and eighteen were "part time" farmers,

It is estimated that twelve of these forty-one families had reached the point where they go on with their farm and home development work without special extension assistance.

VIII. Evaluation of the year's work and trends

1960 may be considered a successful year as far as Extension work in Powhatan county is concerned. A good percentage of the "goals" as outlined in the plan of work was reached. On the other hand some of the goals were not reached. Other accomplishments were made that were not listed in the 1960 plan of work.

The trend in Agriculture is toward "Dairying". Of the 396

farms listed in the 1960 census, fifty-four of these farms are classified as dairy farms.

The classification is broken down as follows:

Field Crops farms	45
Cash grains farms	15
Tobacco farms	30
Livestock farms	45
Poultry farms	15
Dairy farms	54
General farms	15
Miscellaneous and unclassified	229

It is feeling of the Extension Agent that the Dairy Industry is foremost, and of the greatest importance in agricultural incomes. Therefore the Extension Agent can be of most value to the county by concentrated work on the many phases of Dairy Science.

IX. Miscellaneous activities -

A number of duties, and assignments are not covered in the statistical report. A good many days are devoted by the agent in these activities.

Following is a list that maybe included -

1. Arranging for, and holding a county wide "dog clinic".
2. Arranging for and holding a "County Election Board" meeting in connection with A.S.C.
3. Attending Communications school
4. Attending District Conferences
5. Attending Institute of Rural Affairs
6. Attending 4-H Camp

7. Attending Annual Agents' Conference
8. Two day trip to Bettsville Experiment Station
9. Re-working entire "filing system" for

County Extension Office